CONFERENCE ON DISARMAMENT

CD/1640
15 February 2001

ENGLISH
Original: ENGLISH and
RUSSIAN

LETTER DATED 12 FEBRUARY 2001 FROM THE PERMANENT REPRESENTATIVE OF THE RUSSIAN FEDERATION AND THE PERMANENT REPRESENTATIVE OF THE UNITED STATES TO THE CONFERENCE ON DISARMAMENT ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE TRANSMITTING THE RUSSIAN AND ENGLISH TEXTS OF A MEMORANDUM OF UNDERSTANDING ON NOTIFICATIONS OF MISSILE LAUNCHES SIGNED IN BRUSSELS ON 16 DECEMBER 2000 BY U.S. SECRETARY OF STATE MADELEINE K. ALBRIGHT AND RUSSIAN FOREIGN MINISTER IGOR IVANOV

Attached are the Russian and English language textes of a Memorandum of Understanding on Notifications of Missile Launches signed in Brussels on December 16, 2000, by U.S. Secretary of State Madeleine K. Albright and Russian Foreign Minister Igor Ivanov.

We would be grateful if you would issue this Memorandum as an official document of the Conference on Disarmament and distribute it to all member States and non-member participants of the CD.

(Signed) Vasily S. SIDOROV
Ambassador,
Permanent Representative
of the Russian Federation
to the Conference on Disarmament

(Signed) Robert T. GREY, Jr.
Ambassador,
Permanent Representative
of the United States to the
Conference on Disarmament

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ENG

Memorandum of Understanding on Notifications of Missile Launches

The United States of America and the Russian Federation, hereinafter referred to as the Parties,

Guided by the Joint Statement of the Presidents of the United States of America and the Russian Federation on the Exchange of Information on Missile Launches and Early Warning of September 2, 1998,

Considering the obligations of the Memorandum of Agreement Between the United States of America and the Russian Federation on the Establishment of a Joint Center for the Exchange of Data from Early Warning Systems and Notifications of Missile Launches of June 4, 2000, hereinafter referred to as the JDEC Memorandum, and

Taking into account the need to minimize the consequences of a false missile attack warning and to prevent the possibility of a missile launch caused by such false warning,

Have agreed as follows:

1. This Memorandum establishes a Pre- and Post- Missile Launch Notification System, hereinafter referred to as the PLNS.

2. Each Party shall provide pre-launch and post-launch notifications for launches of ballistic missiles that meet the range or altitude criteria set forth in paragraph 4 of this Memorandum and, with rare exceptions, pre-launch and post-launch notifications for launches of space launch vehicles. Each Party, at its discretion and in support of the objectives of this Memorandum, may also provide information in a timely fashion on other launches and objects, including de-orbiting spacecraft, and geophysical experiments and other work in near-earth space that are capable of disrupting the normal operation of equipment of the early warning systems of the Parties.

3. Once the PLNS is in full operation, the Parties shall consider the possibility of, and need for, exchanging information on missiles that intercept objects not located on the earth's surface. If methods are subsequently developed for launching objects into space that are fundamentally different from those which exist at the time this Memorandum enters into force, the Parties will discuss how the PLNS might apply to notifications of such launches.

4. For ballistic missiles, each Party shall provide a notification in accordance with paragraph 2 of this Memorandum when the planned flight range is in excess of 500 kilometers or the planned apex altitude is in excess of 500 kilometers.

5. The terms and their definitions applicable to this Memorandum are provided in Appendix 1 to this Memorandum. Notifications shall be provided in accordance with the provisions of this Memorandum and in the formats set forth in Appendix 2 to this Memorandum. When a date and time are to be specified in a notification, that date and time shall be expressed in Coordinated Universal Time (UTC).

6. Each Party shall provide notifications in accordance with paragraph 2 of this Memorandum of all launches of ballistic missiles and space launch vehicles from the territory of that Party, and all other launches of ballistic missiles and space launch vehicles owned, possessed or controlled by that Party or by any corporation, partnership, joint venture, association or other legal or natural person (either government or private, including international organizations), organized or existing under the laws of that Party.

7. If more than one Party would be obligated in accordance with paragraphs 2 and 6 of this Memorandum to provide a notification of a specific launch, notification shall be provided by the Party from whose territory that launch is conducted. If the launch is not conducted from the territory of a Party, the Parties shall hold consultations to determine which Party will provide the notification. Only one pre-launch notification and one post-launch notification shall be provided for each notifiable launch.

8. A pre-launch notification, as specified in Appendix 2 to this Memorandum, shall set forth a launch window in connection with the notification that shall be valid for four days beginning with the date and time of the beginning of the launch window indicated in the notification. Such a pre-launch notification shall be provided no more than 30 days, but no less than 24 hours, prior to the start of the launch window. The launch window may be extended, in increments of four days. Notification of an extension shall be provided no less than one hour prior to the end of the launch window. If the launch window expires prior to a launch, a new pre-launch notification shall be provided. If simultaneous or near simultaneous launches from the same launch location are planned, a Party may provide a single pre-launch notification for all of the launches.

9. A post-launch notification, as specified in Appendix 2 to this Memorandum, shall be provided not later than 48 hours after the launch.

a. For simultaneous or near simultaneous launches from the same launch location, a Party may provide one post-launch notification for all the launches or a separate post-launch notification for each launch. However, if a separate pre-launch notification has

been provided for each launch, a separate post-launch notification shall be provided for each launch.

b. A cancellation notification for a launch for which a pre-launch notification has been provided shall be provided if the launch is cancelled prior to the beginning of the launch window, or did not take place in the launch window, or is postponed for more than four days. A cancellation notification for a multiple launch is not required if at least one ballistic missile of that multiple launch was successfully launched.

10. Each Party shall ensure the accuracy and timeliness of the data provided by it, and report any errors detected.

11. Unless otherwise agreed by the Parties, all notifications shall be provided to the PLNS Information Center, operated as part of the Joint Data Exchange Center (JDEC) in Moscow as established by the JDEC Memorandum. The PLNS Information Center shall serve as the repository for these notifications, and shall transmit them to the Parties. Until the JDEC is fully operational, an interim repository for notifications shall be created and jointly operated under agreed procedures at a location to be determined by the Parties.

12. The JDEC Heads shall oversee the implementation and operation of the PLNS. The implementation and operation of the PLNS shall be governed by the relevant provisions of the JDEC Memorandum.

13. The PLNS Information Center and the Parties shall use an agreed Internet-based technology incorporating, to the maximum extent feasible, commercially available equipment and software. PLNS equipment, facilities and procedures shall be established and maintained in accordance with the provisions of Appendix 3 to this Memorandum.

14. A Party shall not transfer any equipment, software or other materials and information received pursuant to this Memorandum to any third state or legal or natural person without the written agreement of the Party that provided such equipment, software or other materials and information. Each Party shall use such equipment, software and other materials and information only for the purposes of this Memorandum and shall take all reasonable measures within its power to ensure their safekeeping and security as set forth in Appendix 4 to this Memorandum.

15. The Parties intend that the PLNS shall commence operations no later than 365 days after this Memorandum enters into force. PLNS operations shall commence upon the agreement of the JDEC Joint Commission. Upon commencement of PLNS operations, an operational test period lasting up to 100 days shall follow. During this period, the Parties shall test data exchange procedures, equipment and software, and shall correct shortcomings that they find. The operational test period shall conclude and full

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PLNS operations shall commence as soon as practicable upon agreement of the JDEC Joint Commission.

16. The Parties agree that the PLNS and the JDEC design, when implemented, will create the conditions for the preparation and maintenance of a unified database for a multilateral regime for the exchange of notifications in accordance with paragraph 2 of this Memorandum. The Parties shall seek the participation of other countries in providing such notifications. The Parties shall seek, as soon as possible, agreement on how the PLNS will be opened to the voluntary participation of all interested countries, and shall coordinate this activity with other national, bilateral and international efforts to enhance strategic stability and curtail missile proliferation.

17. The Parties shall hold consultations at least once a year, unless otherwise agreed, to consider matters relating to implementation of this Memorandum, as well as to discuss possible amendments thereto. Amendments to this Memorandum shall enter into force upon agreement of the Parties.

18. This Memorandum, including its associated appendices, shall not infringe upon the rights and obligations of the Parties under other treaties or agreements.

19. This Memorandum, including its associated appendices, all of which form integral parts thereof, shall enter into force on the date of its signature. This Memorandum shall remain in force for ten years. Upon agreement by the Parties, this Memorandum may be extended for successive five-year periods.

20. A Party may withdraw from this Memorandum upon six months written notice.

DONE at Brussels on December 16, 2000, in two copies, each in the English and the Russian languages, both texts being equally authentic.

FOR THE UNITED STATES OF AMERICA:
(signed) Madeleine Albright

FOR THE RUSSIAN FEDERATION:
(signed) I Ivanov

Appendix 1

Terms and Their Definitions

For the purposes of this Memorandum:

a. "Space launch vehicle (SLV)" means a rocket used for delivering an object into earth orbit or outer space.

b. "Ballistic missile (BM)" means a missile that has a ballistic trajectory over most of its flight path, regardless of whether or not it is a weapon-delivery vehicle.

c. "Intercontinental ballistic missile (ICBM)" means a land-based ballistic missile that is a weapon-delivery vehicle with a range in excess of 5500 kilometers.

d. "Submarine-launched ballistic missile (SLBM)" means a ballistic missile that is a weapon-delivery vehicle with a range in excess of 600 kilometers launched from a submarine.

e. "Earth's ellipsoid" means a mathematical model of the surface of the earth. The standard for this model will be agreed by the Parties.

f. "Launch window" means the four-day interval of time during which the ballistic missile launch is scheduled to take place and starting with the day and time specified in a notification.

g. "Day" means a 24-hour period measured from the specific event to be notified, when applied to timing of notifications in this Memorandum.

h. "Payload" means everything that separates from the last propulsion stage of a ballistic missile, except for the previous propulsion stages.

i. "Range" means the maximum distance measured along the surface of the earth's ellipsoid from the point of launch of a ballistic missile to the point of impact of the last element of its payload.

j. "Apex altitude" means the distance measured along the normal to the earth's ellipsoid from its surface to the apex of the flight trajectory of a missile.

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k. "Launch azimuth" means the angle formed by the projection of the flight trajectory of a missile onto the surface of the earth's ellipsoid and the North direction, measured clockwise in degrees.

l. "Geophysical experiment" means activities conducted in near-earth space that are capable of causing changes in the environment of radio wave propagation, leading to a disruption or cessation of the operation of the early warning systems of the Parties.

m. "Spacecraft" means a vehicle with special equipment and intended for flights into or in outer space for military, commercial (economic) or research (scientific) purposes.

Appendix 2

Notification and Message Formats

Notifications shall be made using the following data formats:

Data Format 1: Pre-Launch Notification
Data Format 2: Launch Window Extension Notification
Data Format 3: Post-Launch Notification
Data Format 4: Launch Cancellation Notification
Data Format 5: Geophysical Experiment Notification
Data Format 6: Spacecraft De-orbit Notification

Clarifications, corrections and amplifications to notifications shall be made using the following message formats:

Message Format 101: Clarification Request
Message Format 102: Response to a Clarification Request
Message Format 103: Correction to a Notification
Message Format 104: Amplifying Information

Notification Descriptions:

Data Format 1. Pre-Launch Notification: A pre-launch notification shall be made using Data Format 1 and shall include the following data elements:

a. Notification ID: PLN/PP/YYYY/xxx/zzz/01.
PLN is a prefix which identifies that the notification is related to the PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 001 to 500 that represents the PLNS-generated sequential ID number;
zzz is a number from 001 to 999 that represents the sequential number of the launch, this field is used to identify all notifications associated with a specific launch; and
01 is the notification format number.

b. Generic Missile Type: ICBM, SLBM, SLV or Other. "Other" is the designation for any ballistic missile that is not an ICBM, SLBM or SLV.

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c. Launch Location: name of site, facility, range or broad ocean quadrant from which the missile is to be launched.

d. Launch Window Start Date: date launch window begins. Eight digits (DDMMYYYY) indicate the date.
DD is a number from 01 to 31 that indicates the day of the month;
MM is a number from 01 to 12 that indicates the calendar month; and
YYYY indicates the calendar year.

e. Launch Window Start Time: time launch window begins. Four digits (HHMM) indicate the time.
HH is a number from 00 to 23 that indicates the hour; and
MM is a number from 00 to 59 that indicates the minute.

f. For SLVs and for ballistic missiles for which there is no payload impact area: launch azimuth.

g. For ICBMs and SLBMs and for ballistic missiles for which there is a payload impact area: the geographic coordinates of the planned impact area of the payload. This area shall be specified either by the geographic coordinates of four boundary points, or by the geographic coordinates of the center of a circle with a radius specified in kilometers or nautical miles. The notifying Party shall determine at its discretion the size of the impact area.

h. Indication of a single or multiple launch.

i. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/01.

Data Format 2. Launch Window Extension Notification: Notifications reporting a four-day extension of a launch window shall be made using Data Format 2 and shall include the following data elements:

a. Notification ID: PLN/PP/YYYY/xxx/zzz/02-n.
PLN is a prefix which identifies that the notification is related to the PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 001 to 500 that represents the PLNS-generated sequential ID number;
zzz is a number from 001 to 999 that represents the sequential number

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of the launch, this field is used to identify all notifications associated with a specific launch; and

02-n is the notification format number, where n is a number between 1 and n that represents the number of the extension. The notification format number for the first extension shall be 02-1. Additional, consecutive, extensions shall be sequentially numbered.

b. Reference: reference to precursor notification (Data Format 1) using its unique identification number PLN/PP/YYYY/xxx/zzz/01.

c. Generic Missile Type: ICBM, SLBM, SLV or Other. "Other" is the designation for any ballistic missile that is not an ICBM, SLBM or SLV.

d. Launch Location: name of site, facility, range or broad ocean quadrant from which the missile is to be launched.

e. Revised Launch Window Start Date: date revised launch window begins. Eight digits (DDMMYYYY) indicate the date.

DD is a number from 01 to 31 that indicates the day of the month;
MM is a number from 01 to 12 that indicates the calendar month; and
YYYY indicates the calendar year.

f. Revised Launch Window Start Time: time revised launch window begins. Four digits (HHMM) indicate the time.

HH is a number from 00 to 23 that indicates the hour; and
MM is a number from 00 to 59 that indicates the minute.

g. For SLVs and for ballistic missiles for which there is no payload impact area: launch azimuth.

i. For ICBMs and SLBMs and for ballistic missiles for which there is a payload impact area: the geographic coordinates of the planned impact area of the payload. This area shall be specified either by the geographic coordinates of four boundary points, or by the geographic coordinates of the center of a circle with a radius specified in kilometers or nautical miles. The notifying Party shall determine at its discretion the size of the impact area.

i. Indication of a single or multiple launch.

j. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/02-n.

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Data Format 3. Post-Launch Notification: A post-launch notification confirming that a launch has occurred shall be made using Data Format 3 and shall include the following data elements:

a. Notification ID: PLN/PP/YYYY/xxx/zzz/03.

PLN is a prefix which identifies that the notification is related to the PLNS;

PP is a Country Identification Code;

YYYY indicates the calendar year;

xxx is a number from 001 to 500 that represents the PLNS-generated sequential ID number;

zzz is a number from 001 to 999 that represents the sequential number of the launch. this field is used to identify all notifications associated with a specific launch; and

03 is the notification format number.

b. Reference: Reference to the most recent precursor notification (Data Format 1 or Data Format 2) for the launch that has taken place, using the notification's unique identification number.

c. Launch Date: Reported date of launch. Eight digits (DDMMYYYY) indicate the date.

DD is a number from 01 to 31 that indicates the day of the month;

MM is a number from 01 to 12 that indicates the calendar month; and

YYYY indicates the calendar year.

d. Launch Time: Reported time of launch. Four digits (HHMM) indicate the time.

HH is a number from 00 to 23 that indicates the hour; and

MM is a number from 00 to 59 that indicates the minute.

e. Number of missiles launched.

f. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/03.

Data Format 4. Launch Cancellation Notification: A notification canceling a previously notified launch shall be made using Data Format 4 and shall include the following data elements:

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a. Notification ID: PLN/PP/YYYY/xxx/zzz/04.

PLN is a prefix which identifies that the notification is related to the PLNS;

PP is a Country Identification Code;

YYYY indicates the calendar year;

xxx is a number from 001 to 500 that represents the specific PLNS-generated sequential ID number;

zzz is a number from 001 to 999 that represents the sequential number of the launch, this field is used to identify all notifications associated with a specific launch; and

04 is the notification format number.

b. Reference: Reference to the most recent precursor notification (Data Format 1 or Data Format 2) for the launch that has been canceled, using the notification's unique identification number.

c. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/04.

Data Format 5. Geophysical Experiment Notification: A notification of the time and location of a geophysical experiment shall be made using Data Format 5 and shall include the following data elements:

a. Notification ID: PLN/PP/YYYY/xxx/zzz/05.

PLN is a prefix which identifies that the notification is related to the PLNS;

PP is a Country Identification Code;

YYYY indicates the calendar year;

xxx is a number from 001 to 500 that represents the PLNS-generated sequential ID number;

zzz is a number from 001 to 999 that represents the sequential number of the event, this field is used to identify all notifications associated with a specific event; and

05 is the notification format number.

b. Location where the experiment will be conducted: Geographic coordinates of the projection on the earth's ellipsoid, and the altitude in kilometers above the earth's ellipsoid, for the predicted center of the volume of the disturbance produced by the planned geophysical experiment.

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c. Date when the experiment will be conducted: Eight digits (DDMMYYYY) indicate the date.
DD is a number from 01 to 31 that indicates the day of the month;
MM is a number from 01 to 12 that indicates the calendar month; and
YYYY indicates the calendar year.

d. Time when the experiment will be conducted: Four digits (HHMM) indicate the time when the planned trajectory of the geophysical experiment is to be closest to the predicted center of the volume of the disturbance produced by the geophysical experiment.
HH is the number from 00 to 23 that indicates the hour; and
MM is a number from 00 to 59 that indicates the minute.

e. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/05

Data Format 6. Spacecraft De-orbit Notification: A notification of the de-orbit of a spacecraft shall be made using Data Format 6 and shall include the following data elements:

a. Notification ID: PLN/PP/YYYY/xxx/zzz/06.
PLN is a prefix which identifies that the notification is related to the PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 001 to 500 that represents the PLNS-generated sequential ID number;
zzz is a number from 001 to 999 that represents the sequential number of the event, this field is used to identify all notifications associated with a specific event; and
06 is the notification format number.

b. Location of event: Geographic coordinates of the point on the earth's ellipsoid directly below the point at which the de-orbiting spacecraft is predicted to reach an altitude of 50 kilometers on its final descent.

c. Date of event: Eight digits (DDMMYYYY) indicate the date.
DD is a number from 01 to 31 that indicates the day of the month;
MM is a number from 01 to 12 that indicates the calendar month; and
YYYY indicates the calendar year.

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d. Time of event: Four digits (HHMM) indicate the time when the de-orbiting spacecraft is predicted to reach an altitude of 50 kilometers on its final descent.

HH is the number from 00 to 23 that indicates the hour; and

MM is a number from 00 to 59 that indicates the minute.

e. End of: Notification ID using the unique identification number - PLN/PP/YYYY/xxx/zzz/06.

Message Descriptions:

Message Format 101. Clarification Request: A message requesting clarification of a previously received notification shall be made using Message Format 101 and shall include the following data elements:

a. Message ID: PLN/PP/YYYY/xxx/101.

PLN is a prefix which identifies that the message is related to the PLNS;

PP is a Country Identification Code;

YYYY indicates the calendar year;

xxx is a number from 501 to 999 that represents the PLNS-generated sequential ID number; and

101 is the message format number.

b. Reference: Unique identification number of the notification requiring clarification.

c. Notification elements to be clarified: Clarification requested.

d. Etc.

e. End of: Message ID using the unique identification number - PLN/PP/YYYY/xxx/101.

Message Format 102. Response to a Clarification Request: A message responding to a request for clarification of a previously received message shall be made using Message Format 102 and shall include the following data elements:

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a. Message ID: PLN/PP/YYYY/xxx/102.
PLN is a prefix which identifies that the message is related to PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 501 to 999 that represents the PLNS-generated sequential ID number; and
102 is the message format number.

b. Reference: Unique identification number of the message requesting clarification.

c. Clarification: Textual information clarifying the requested notification element.

d. End of: Message ID using the unique identification number - PLN/PP/YYYY/xxx/102.

Message Format 103. Correction to a Notification: A message of correction or modification to a previously received notification shall be made using Message Format 103 and shall include the following data elements:

a. Message ID: PLN/PP/YYYY/xxx/103.
PLN is a prefix which identifies that the message is related to the PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 501 to 999 that represents the PLNS-generated sequential ID number; and
103 is the message format number.

b. Reference: Unique identification number of the notification requiring correction or modification.

c. Notification element to be corrected or modified:
(1) Old value;
(2) New value.

d. Etc.

e. End of: Message ID using the unique identification number - PLN/PP/YYYY/xxx/103.

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Message Format 104. Amplifying Information: A message amplifying information provided in a previously received notification or message shall be made using Message Format 104 and shall include the following data elements:

a. Message ID: PLN/PP/YYYY/xxx/104.
PLN is a prefix which identifies that the message is related to the PLNS;
PP is a Country Identification Code;
YYYY indicates the calendar year;
xxx is a number from 501 to 999 that represents the PLNS-generated sequential ID number; and
104 is the message format number.

b. Reference: Unique identification number of the notification or message for which amplifying information is being provided.

c. Amplifying Information: Textual information of an amplifying nature.

d. End of: Message ID using the unique identification number - PLN/PP/YYYY/xxx/104.

Note:

Unique Country Codes for notifications and messages will be determined by the JDEC Joint Commission as individual countries seek to participate in the PLNS.

Appendix 3

System Implementation

Each Party shall be separately responsible for maintaining the equipment and software it provides. The Parties shall be jointly responsible for ensuring the operational integrity of the PLNS. Each Party shall be separately responsible for providing and maintaining its own properly trained personnel, suitable facilities, equipment and software, a single designated computer workstation for providing information consisting of notifications and messages to the PLNS Information Center, one or more computer workstations for searching and displaying information, internal procedures for providing information to computer workstations, and an interface compatible with the computer and communications architecture of the PLNS. Standard operating procedures for operators, the designated computer workstation and other computer workstations of the Parties, and the equipment and software for the PLNS shall be agreed by the Parties.

The Parties agree to employ the following reporting system to collect, store, process and display information on launches.

1. System Architecture: The reporting system architecture shall consist of a central server supporting several distributed, Internet-technology enabled computer workstations, all connected via a virtual private network (VPN). The system architecture shall be capable of reliably supporting multiple-users (approximately 200) simultaneously with a high quality of service so that users can post information to, and query information from, a database located on the central server at the PLNS Information Center. This system shall not disrupt or otherwise interfere with existing early warning systems.

2. Information Security: The Parties shall establish authorized user access procedures and a mechanism to prohibit intrusion or posting of fraudulent data, to include:

a. User Authentication;

b. Data Authentication and Integrity; and

c. Message Privacy.

3. System Components: The system shall include a central server that can host a database; electronic mail and web applications; a single designated PLNS computer workstation for each Party that can interact with the database to submit notifications and messages; one or more computer workstations that can search and display launch

information; and also VPN equipment that must provide a secure and reliable exchange of data between each Party's PLNS computer workstations and the central server at the PLNS Information Center.

4. Electronic Mail: Electronic mail shall be used to send and receive messages, as a backup means to send and receive notifications, and for performing other functions when the primary notification system is disabled. Additionally, it will serve as a means to transfer unformatted information and other documents between the Parties and the PLNS Information Center. The e-mail program shall meet the following technical requirements:

a. The e-mail shall use generally recognized Internet protocols and standards for transmitting messages;

b. The addresses for e-mail messages shall be expressed in Latin characters;

c. Text shall be sent as an attachment to an e-mail message and created using agreed software; and

d. The attached text shall be sent in two versions; the first in the Party's national language and the second in either English (Latin characters) or Russian (Cyrillic characters). If the national language English or Russian, there is no requirement to submit the second version.

5. System Operational Procedures: The PLNS shall be available for use at all times. Each Party shall access the PLNS using a computer workstation connected to the central server via the VPN. Specific conditions for system operations include:

a. The central server shall be located in the PLNS Information Center;

b. The system may be operated in three modes: live mode for normal operations; training mode to provide an interactive training capability, and test mode to support the verification of upgraded software;

c. Each Party may have more than one computer workstation in separate locations connected to the central server, however:

(1) Only a single designated PLNS computer workstation may serve as the official data entry point for that Party; and

(2) All other computer workstations shall be restricted to read-only capabilities; and

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d. Each Party shall designate a limited number of operators as PLNS launch data reporters for the designated PLNS computer workstation that is its official data entry point. The maximum number of PLNS launch data reporters shall be agreed in the JDEC Joint Commission. Only PLNS launch data reporters shall have notification posting privileges for that Party. All other users shall be restricted to read-only capabilities. All PLNS users shall have access to the e-mail application.

6. System Administration: JDEC system administrators shall be located at the PLNS Information Center and shall have overall responsibility for:

a. Maintaining the system at full operational capability;

b. Managing user access to the system;

c. Monitoring and enforcing information security measures;

d. Ensuring configuration control for the system;

e. Establishing and maintaining backup procedures;

f. Establishing contingency procedures for emergencies, such as operation at degraded levels;

g. Scheduling and executing systems tests and exercises;

h. Scheduling and monitoring maintenance and repairs conducted by technical support personnel;

i. Posting and updating on-line documentation as required; and

j. Archiving the English and Russian versions of e-mail attachments.

7. System Documentation: The system shall provide the following documentation on-line:

a. Memorandum and associated documents;

b. System Description;

c. System Technical Specifications;

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d. Data Dictionary;

e. User Guide;

f. System certification; and

g. Other documents, as agreed by the Parties.

Appendix 4

Security Management

The Parties shall establish the necessary measures and procedures for protecting information being collected, stored, processed and distributed by the PLNS, as well as for protecting the hardware and software used in the system.

1. Information Security: Information Security for the system shall be based on the following principles:

a. Each Party shall treat all information on the system to be of a confidential and sensitive nature, and such information may only be used for the purposes of this Memorandum. Each Party shall itself determine the necessary measures for the appropriate handling of the information and its required protection in accordance with its own laws and regulations.

b. Each Party shall establish strict authorized user access procedures as well as measures to prohibit intrusion or posting of fraudulent data on the system.

c. The system shall include the following security elements: two-factor user authentication, data authentication and integrity, and message encapsulation and encryption.

d. System administrators designated by the Parties shall periodically review audit logs for the system to identify, evaluate and report any discrepancies in data transactions.

2. Physical Security: The Parties agree to establish and uniformly implement agreed measures and procedures for controlling physical access to the PLNS. In this regard, each Party shall establish physical constraints to preclude unauthorized user access to its PLNS computer workstations and shall continuously maintain a local record of all personnel having direct access to any PLNS equipment.

a. The following measures shall be implemented at the central server:

(1) All system equipment shall be located in a secure facility;

(2) Personnel access controls shall be implemented to prevent unauthorized access to the equipment and software; and

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(3) Only maintenance personnel approved by the Parties shall be permitted to service the equipment; and

b. Each Party shall take the following measures for all its computer workstations connected to the PLNS:

(1) All computer workstations shall be located in a secure facility;

(2) Personnel access controls shall be implemented to prevent unauthorized access to the equipment and software;

(3) A maintenance and service log shall be maintained; and

(4) A proper operating environment (temperature, humidity, etc.) shall be provided.

3. Certification procedures for the PLNS shall be agreed by the Parties.

Joint Statement on Funding Procedures

In connection with the Memorandum of Understanding on Notifications of Missile Launches, the Parties have agreed that:

— fulfillment of any financial obligation of the United States of America or the Russian Federation is subject to the availability of funds for such purpose;

— transfer for the purposes of this Memorandum by the United States of America or the Russian Federation of any technology or equipment pursuant to this Memorandum is subject to the export laws and regulations of the United States of America or the Russian Federation, respectively;

— fulfillment of any financial obligations by the United States of America or the Russian Federation regarding equipping the PLNS Information Center with hardware and software is subject to authorization, when required, by the Congress of the United States of America or the Government of the Russian Federation, respectively.